

REMARKS

Claims 1 through 20 are pending in this application, of which claims 16 through 20 stand withdrawn from consideration pursuant to the provision of 37 C.F.R. §1.142(b). Applicant acknowledges, with appreciation, the Examiner's indication that claims 3, 4, 8 and 12 contain allowable subject matter. Accordingly, the only remaining issue pivots about the patentability of claims 1, 2, 5 through 7, 9 through 11 and 13 through 15.

Claims 1, 2, 14 and 15 were rejected under 35 U.S.C. §102 for lack of novelty as evidenced by U.S. Patent No. 6,137,130 issued to Sung.

This rejection is traversed in light of the amendment to claim 1 and the following comments.

As previously set forth, the factual determination of lack of novelty under 35 U.S.C. §102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the knowing possession of one having ordinary skill in the art. *Elan Pharmaceuticals Inc. v. Mayo Foundation*, __F.3d__, 64 USPQ2d 1292 (Fed. Cir. 2002); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fec. Cir. 2002). There are significant structural differences between the claimed semiconductor device and Sung's semiconductor device that scotch the factual determination that Sung identically describes the claimed invention within the meaning of 35 U.S.C. §102.

In accordance with the claimed invention, **conductive** parts of the transfer gates and the contact plugs have a coplanar height which is also defined by the same surface as the first interlayer insulating film. Because of this structure, it is possible to increase the

height of the transfer gate for the purpose of suppressing electrical resistance of the gate electrode when the design size of the DRAM decreases. As presently amended, claim 1 now more particularly requires that the upper surfaces of the contact plugs and the upper surfaces of the conductive parts of the transfer gates are substantially coplanar. This feature is neither disclosed nor suggested by Sung. In fact, the Examiner implicitly acknowledges that Sung does not disclose this structure. Thus, the imposed rejection is clearly factually erroneous.

The Examiner continues to erroneously adhere to the position that cap layer 6 is part of the transfer gate, i.e., conductive transfer gate. However, the capping layer is just what Sung says it is--a layer of silicon nitride which is **not conductive**. Hence, while it may broadly be considered part of an overall gate structure, it certainly is not a conductive part of the transfer gate of the semiconductor device defined in claim 1. The Office Action implicitly acknowledges that Sung fails to disclose or suggest that upper surfaces of contact plugs and the upper surfaces of the conductive parts of the transfer gates are substantially coplanar, as required by claim 1.

Indeed, in the first full paragraph on page 8 of the January 16, 2003 Office Action, the Examiner acknowledges Applicant's argument that Sung does not disclose a semiconductor device wherein the conductive transfer gate has an upper surface coplanar with the upper surface of the contact plug. In the first full paragraph of the January 16, 2002 Office Action, the Examiner responds as follows:

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which Applicant relies, i.e., the conductive gate electrode which has upper surface coplanar with the upper surface of the contact plug) are not recited in the rejected claim(s).

Applicant has expressed disagreement with the Examiner's interpretation of claim 1 as then presented and still adheres to this position. However, to resolve any doubt on the issue, claim 1 now has been amended to explicitly recite that "the upper surfaces of the contact plugs and the upper surfaces of the conductive parts of the transfer gates are substantially coplanar."

As the Examiner implicitly admits that Sung's semiconductor's device does not satisfy the requirement of independent claim 1 for the upper surfaces of the contact plugs and the upper surfaces of the conductive parts of the transfer gates to be substantially coplanar, the imposed rejection under 35 U.S.C. §102 is not factually viable.

It is submitted that the above argued differences between the claimed semiconductor device and Sung's semiconductor device undermine the factual determination of lack of novelty under 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicant, therefore, submits that the imposed rejection of claims 1, 2, 14 and 15 under 35 U.S.C. §102 for lack of novelty as evidenced by Sung is not factually viable and, hence, solicits withdrawal thereof.

Claims 5, 6, 9 and 10 were rejected under 35 U.S.C. §103 for obviousness predicated upon Sung in view of Ozaki et al.

Claims 7 and 11 were rejected under 35 U.S.C. §103 for obviousness predicated upon Sung in view of Ozaki et al. and Hsu et al.

Claim 13 was rejected under 35 U.S.C. §103 for obviousness predicated upon Sung in view of Lou.

Each of the above rejections under 35 U.S.C. §103 is traversed. Specifically, each of rejected claims 5 through 11 and 13 depend from independent claim 1. Applicant incorporates herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 102 for lack of novelty as evidenced by Sung. Specifically, Sung neither discloses nor suggest a semiconductor device comprising conductive transfer gates and contact plugs adjacent to thereto, wherein the upper surfaces of the contact plugs and the upper surfaces of the conductive parts of the transfer gates are substantially coplanar, and the Examiner does not contend otherwise. The additional references to Ozaki et al., Hsu et al. and Lou do not cure the argued deficiencies of Sung. Accordingly, even if the applied references are combined, the claimed inventions would not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

Applicant, therefore, submits that the imposed rejection of claims 5, 6, 9 and 10 under 35 U.S.C. § 103 for obviousness predicated upon Sung in view of Ozaki et al., the imposed rejection of claims 7 and 11 under 35 U.S.C. §103 for obviousness predicated upon Sung in view of Ozaki et al. and Hsu et al. and the imposed rejection of claim 13 under 35 U.S.C. §103 for obviousness predicated upon Sung in view of Lou are not factually or legally viable and, hence, solicit withdrawal thereof.

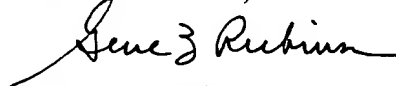
Applicant again acknowledges, with appreciation, the Examiner's indication that claims 3, 4, 8 and 12 contain allowable subject matter. Based upon the argument

submitted supra, Applicant submits that the imposed rejections have been overcome and that all active claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY



Gene Z. Robinson

Registration No. 33,351

600 13th Street, N.W.
Washington, DC 20005-3096
(202) 756-8000 GZR:lnm
Facsimile: (202) 756-8087
Date: May 15, 2003